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## OCCUPATIONAL THERAPY IN TUBERCULOSIS<sup>1</sup>

A CRITICAL RETROSPECT UPON THE PROGRAM OF PHYSICAL RE-  
CONSTRUCTION AS DEVELOPED IN THE MILITARY HOSPITALS  
FOR TUBERCULOSIS

By FRANK A. WAUGH

CAPTAIN, SANITARY CORPS

THE reconstruction of disabled soldiers is something new. It had never been tried before the great war on any appreciable scale. Nevertheless all the leading nations in this war undertook extensive and systematic reconstruction almost from the start. Germany, France and England began the work promptly, and on a large scale. The success of their efforts was sufficiently plain, so that the United States coming later into the struggle, felt constrained to undertake something along similar lines.

There was some uncertainty for a time as to how and under what direction this work should be organized. The plan eventually adopted was for the preliminary work of the hospital period to be done by the Surgeon General's Office, while the more extended work of vocational retraining was deferred until after discharge from the hospital and the Army, and was placed in the hands of the Federal Board for Vocational Education.

A Division of Physical Reconstruction, with Colonel Frank Billings at its head, was therefore organized within the Surgeon General's Office, and definite work began early in 1918. One general hospital after another was manned and equipped, and finally the work, having proved its value, was extended to several base hospitals. The first of the tuberculosis hospitals to be regularly organized for this work was No. 16. Lieutenant-Colonel Alexius M. Forster, Commanding Officer, an experienced sanitarium man, had begun certain work along reconstruction lines, especially gardening, early in the spring of 1918. In July, Captain Frank A. Waugh arrived to take up the organization of a larger reconstruction service under direction of the Division of Physical Reconstruction in the Surgeon General's Office. For the next few months the reconstruction program

<sup>1</sup> Published under authority of the Surgeon-General, United States Army.

was expanded, adapted and readapted to varying needs as fast as experience showed the way and equipment could be found. Other Army hospitals handling tuberculosis were later organized for reconstruction work, including No. 8 at Otisville, New York; No. 17 at Markleton, Pennsylvania; No. 19 at Oteen, North Carolina; No. 21 at Denver, Colorado; Fort Bayard, New Mexico; and Whipple Barracks, Arizona.

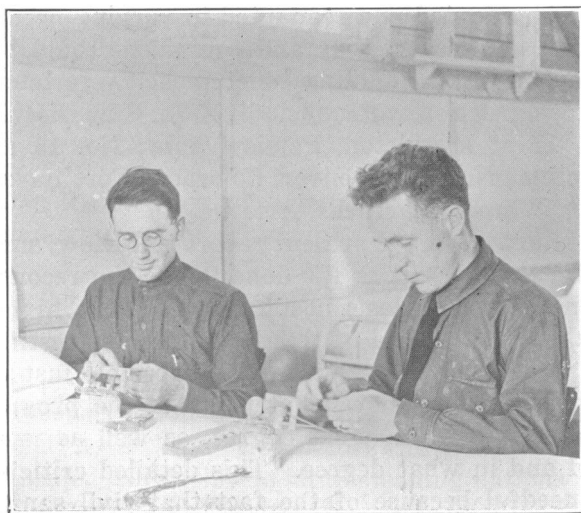
It is the purpose of the present report to review, summarize, and criticize the work thus far done under the reconstruction program in the tuberculosis hospitals. It seems highly desirable to make a full record of this large and interesting experiment and to determine as accurately as possible just what has been accomplished, to know what parts of the program have proved successful and in what degree, as well as what items have failed and in what degree. This detailed criticism is all the more needful because of the fact that civil sanatoria for tuberculosis are particularly anxious to profit by the experiments made in the Army hospitals. The present discussion is based mainly upon the experience accumulated at General Hospital No. 16; but Hospital No. 8 and No. 19 were also visited (as well as several other Army hospitals not specializing in tuberculosis), and considerable help has been secured through correspondence with officers doing reconstruction work in Denver and Fort Bayard.

### SPECIFIC PURPOSES

Several quite distinct motives have been influential in the development of the reconstruction program. These have not all worked together, but have operated differently at different times. Any fair understanding of the work must be based upon a clear conception of these objectives. Those which appear to have been the most influential may be summarized as follows:

1. *Return of Men to Military Duty*.—During the progress of the war this motive stood above all others. In Germany and France, particularly, special effort was made to redevelop for military service the largest possible proportion of disabled men. In American hospitals likewise the salvage of fighting men was earnestly sought. Much of the reconstruction work done prior to the armistice was directed to the training of men for further military or semi-military service. Instruction in the automobile shops, for example, prepared men for the Motor Transport Corps, and training in telegraphy was directed to the preparation of men for the Signal Corps.

2. *Vocational Reeducation*.—At the outset of the work in the United States probably the leading thought was the voca-



BEDSIDE WORK IN AN OPEN WARD. Bead-weaving—very popular and remunerative.

tional rehabilitation of disabled men. It was conceived that many soldiers would be so injured, especially by the loss of limbs or of sight, as to be incapacitated for their previous employments, and their retraining for new vocations was considered a prime duty of the government. Two important observations may now be made with reference to this idea: First the number of men requiring replacement in new vocations proved to be very much smaller than anticipated; Second, such vocational retraining, when necessary, can be more efficiently given after discharge from the hospital. In the United States the work of the Reconstruction Service of the Surgeon General's Office divides naturally from that of the Federal Board for Vocational Education precisely on these lines—a division which now seems wholly sound and sensible.

3. *Functional Restoration*.—Historically this was one of the earliest and strongest motives behind the program of physical reconstruction. In orthopedic practice it obviously plays a major rôle. In the treatment of tuberculosis, however, functional restoration is of such minor importance as hardly to be considered a direct objective at all. However the functional test which comes toward the end of the treatment period is in some sense restorative.

4. *Graduated Exercise*.—Perhaps the nearest approach to functional restoration in the tuberculosis program is found in the application of graduated exercise as a therapeutic measure. The therapeutic value of graduated exercise seems to be still a very much debated point among medical men. The case ob-

viously can not be reviewed here; but we may say briefly that, wherever and to whatever extent graduated exercise is brought into play, it fits immediately in to the general program of reconstruction.

5. *Functional Test.*—Many medical men who do not believe in graduated exercise as a form of therapy applicable to any stage of the tuberculosis treatment would nevertheless favor a functional test or try-out for cases apparently fully arrested, this test to be carefully given under medical supervision before the patient is finally returned to full military or economic duty. This test would take the form of graduated labor increased from day to day, as indicated, up to the point of a full day's work. Such a test also becomes a part of the reconstruction program.

6. *General Therapy.*—It should not require argument to show that the various activities grouped under the rather loose term of physical reconstruction are capable of assisting in the cure of patients in many indirect ways. As regards the treatment of tuberculosis, a special point may be made of the reconstruction contribution to the rest cure. Rest in bed and later in chairs in the open air constitutes the standard treatment; at least it is the one feature to which constant attention is required. Now it has been amply demonstrated that for convalescing



BUSY HOURS ON AN OPEN-AIR WARD. Reconstruction Aide in center;  
Nurse in background.



MAKING BASKETS AND TOYS ON THE OPEN PORCH IN THE SUN.

(non-febrile) bed cases and for all porch-chair cases the various forms of occupational therapy give more practical help toward the enforcement of the rest program than anything yet devised.

7. *Psychotherapy*.—Eminent tuberculosis specialists have laid much stress upon the mental attitude of the patient as a leading factor in treatment. While the value of this factor will doubtless be estimated differently by different men, all are likely to assign some importance to it. Experience shows that nothing does more than congenial occupation toward establishing an orderly state of mind, a healthy equanimity, an efficient self-control and a hopeful outlook toward the future. Results at this point have been so emphatic as hardly to leave any room for question.

8. *Morale*.—There is to be considered further the question of social psychology or the morale of the whole community. In the Army hospitals morale has been a critical factor, and it is certain to play some part in every sanatorium or colony. And we may say without hesitation that well-directed occupation for the hands and minds of patients does much to maintain morale.

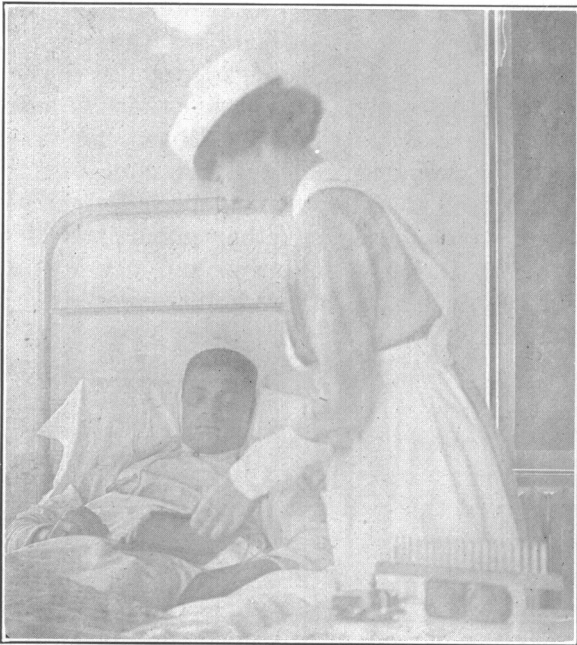
9. *General Education*.—In the programs devised for the Army hospitals, general education early became a leading feature. The principal reasons for this were three: (a) The occupation of the patient's mind with interesting studies is fre-

quently the simplest form of occupational therapy; (b) The extraordinary and unexpected deficiencies in general education revealed in the Army made it seem a public duty to seize every opportunity for improvement; (c) Especially the illiterate element, which reached alarming figures, seemed to call for heroic measures of correction. Beyond these cases lay a certain number of men of better education who were glad to take advanced studies in commercial, scientific or semi-professional lines. The work in general education therefore developed to considerable proportions in the Army hospitals.

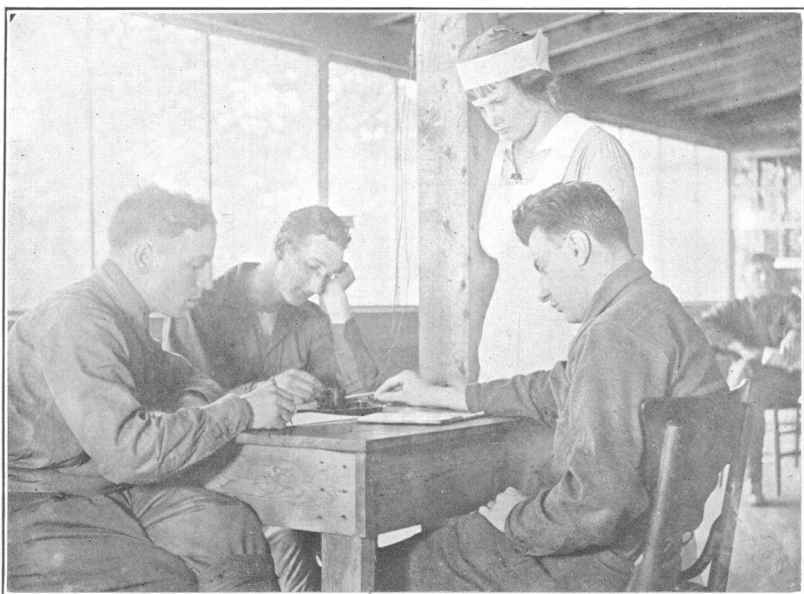
10. *Americanization.*—The alien soldiers, of whom there were vast numbers, presented a most serious special problem. Some of these were wholly illiterate, others could read their native languages but could not read English, practically all of them were very imperfectly schooled in elementary branches and dangerously ignorant of American institutions. It could hardly be denied that the government of the United States owed a special duty toward these men, and had a special need to protect itself by the Americanization of all such men to the utmost. A carefully planned and intensive effort was made therefore toward this end.

#### THE RECONSTRUCTION STAFF

In each of the general and base hospitals designated for the



HANDCRAFTS FOR BED PATIENT.



TELEGRAPH SCHOOL ON AN OPEN-AIR WARD.

reconstruction work a special staff was organized under direction of the Division of Physical Reconstruction. The staff was made up of four classes :

(a) Commissioned officers (those specially selected for this work being commissioned in the Sanitary Corps).

(b) Enlisted men, Medical Corps, specially chosen for educational or technical qualifications and taken by voluntary induction from deferred draft classifications. (A large proportion of these men were eventually given a noncom status).

(c) Reconstruction Aides, women specially trained in crafts or as teachers, and having a rather anomalous status somewhere between that of an Army nurse and a civil employee.

(d) Civil employees, both men and women, used in a great variety of duties.

#### METHODS EMPLOYED

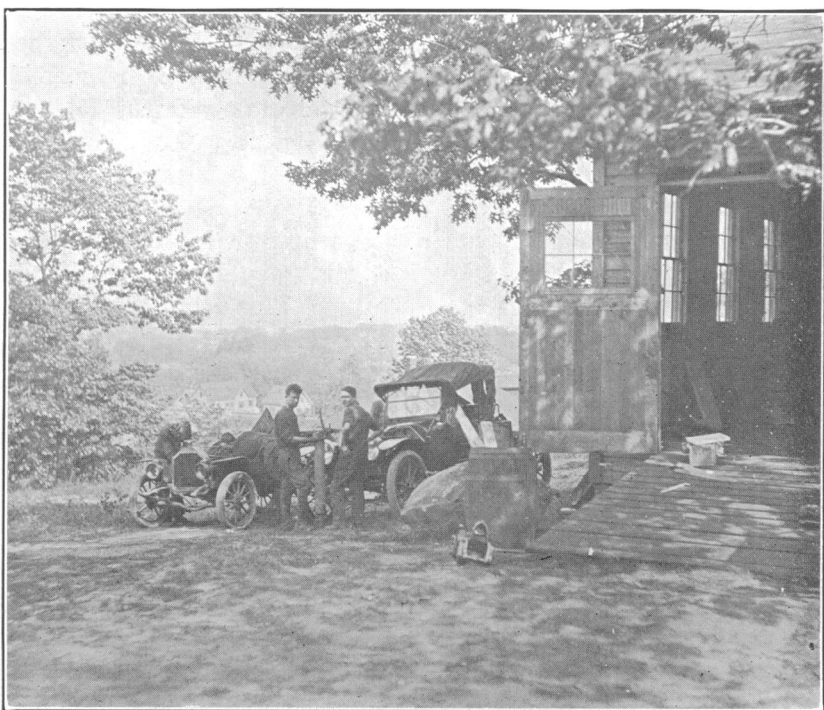
In pursuit of the various objectives already set forth a great variety of expedients were adopted. Many methods were tried, with varying success. A review of the principal experiments seems necessary at this point.

1. *Vocational Teaching* in very mild forms was attempted at General Hospital No. 16 in gardening, poultry culture, telegraphy, typewriting, woodworking and automobile mechanics. For this work the personnel was good, the physical equipment meager.



2. *The General Schools.*—Small groups, mostly placed on wards and porches, were organized for instruction in general subjects, such as reading, writing, arithmetic, history, book-keeping, drawing, French, etc. The instructors in these schools were of rather extraordinary caliber.

3. *Americanization School.*—A special school was organized to assist in the Americanization of foreign soldiers and particularly to secure the actual naturalization of every fit alien. This work was facilitated by special act of Congress. At No. 16 the Chief of the Reconstruction Service was also made Chief Naturalization Officer, thus coordinating the two undertakings. First of all every effort was made to teach every alien soldier to read and write the English language. All these men were then taken into a class in civics which met daily with a particularly competent instructor. The central feature of these daily meetings was open discussion of phases of government in which the patients themselves had had experience, *e. g.*, the post office and what it does, the policeman and his duties, the health department, the Army draft, the American school system, etc. The purpose of this instruction was to lead the men to see what American institutions are like, how they are man-



AUTOMOBILE SHOP—THE WORK CONDUCTED OUT OF DOORS IN THE SUNLIGHT.



A GREEK PUPIL; ILLITERATE, LEARNED TO READ AND WRITE AND BECAME AN AMERICAN CITIZEN.

aged and what is the real spirit of American government behind them. Finally these men were examined by a special agent of the Naturalization Bureau, were taken to the Federal Court by their instructors and given the papers which made them full-fledged American citizens.

4. *Individual Instruction.*—A considerable number of patients who could not, for one reason or another, come into these school groups were given daily instruction on their home wards by enlisted men or reconstruction aides. This work was reasonably efficient.

5. *Crafts Teaching.*—As the reconstruction program developed the largest single enterprise was the teaching and supervision of handicrafts on the wards. This work was wholly in the hands of reconstruction aides. The most popular crafts were hand weaving (colonial mats), rake knitting, bead weaving, leather working, basketry, manufacture of wooden toys, wood carving, simple metal working.

6. *Hospital Service.*—A certain proportion of patients are judged by their ward surgeons to be able to perform various necessary duties about the hospital, such as sweeping floors, helping in the kitchen, etc. Work of this sort has been assigned on prescription and recorded as a part of the reconstruction

program. When properly supervised it can be readily fitted into a scheme of graduated exercise.

7. *Military Drill.*—While the war was still in progress and the effort to return men to military service was still strong, a "Reconstruction Detachment" was organized at No. 16 into which were brought all men approaching recovery and destined soon to be returned to duty. Such men were given daily military drills, were present at retreat, etc. This routine was continued in a slightly modified form after the signing of the armistice.

8. *Graduated Walks.*—At some of the tuberculosis hospitals, notably at No. 8, extended use was made of graduated walks as a part of the reconstruction program. To a less extent this feature was developed at No. 16.

9. *Recreation.*—Athletic games are capable of contributing very largely to the restoration of physical function in cases where ordinary muscular functions are impaired. Thus in orthopedic hospitals the extensive development of athletic sports was natural. Such forms of recreation may also assist materially in keeping up morale. In the treatment of tuberculosis, however, active games have to be prohibited; but mild



A CITIZENSHIP CLASS. These alien soldiers all received their naturalization papers.

inactive diversions and games upon the wards are encouraged as a morale measure. For reasons of morale also the Reconstruction Service cooperated at all times with the various welfare agencies in a general provision of recreation for the post.

10. *Social Service*.—On March 6, 1919, the Surgeon General's Office sent to this hospital a special reconstruction aide designated for "medical social service." The field of her operations was most problematic, but the incumbent proved to be a well-trained and tactful woman who made herself distinctly useful in many ways. In general her duties were to collect personal histories of all patients as required on the Surgeon General's Office Form 58, to put patients in touch with the facilities of the Reconstruction Service, to see that every case of need of every sort was passed to the appropriate official or welfare agency, to follow each patient through the hospital and to see that his case was cleared up at all points when he left.

#### CRITICISM OF RESULTS

Having outlined the purpose of the reconstruction work and the methods adopted for reaching those objectives, it is now possible to make an appraisal of results.

1. *Return of Men to Military Duty*.—The work had not gone far enough prior to the signing of the armistice to have given definite results in the return of many tuberculous men to military service. It is obvious that such returns would necessarily be slow and comparatively few, and that the majority of the men returned would be fit only for limited service. Yet there was considerable promise of results within these limits.

2. *Vocational re-education*, as has already been pointed out, has proved to be generally impracticable under hospital conditions, and the burden of this responsibility has been taken over by the Federal Board for Vocational Education. Experience seems to indicate that a few cases in civil sanatoria may be found where a change of occupation seems advisable and in which the beginnings of vocational retraining can be made during the sanitarium period. Inasmuch as the cure of tuberculosis frequently involves the adoption of an entirely new plan of life, with all its psychological readjustments, and since vocation must bulk large in the adjustment of most men, it is obviously desirable to meet these problems as a part of the treatment and during the period of sanitarium reconstruction.

3. *Graduated Exercise*.—Avoiding still any argument as to the therapeutic value of graduated exercise, the possibilities of auto-intoxication, and all that endless debate, we may reiterate the statement that such exercise is perfectly feasible as a part

of the reconstruction program. However if it is to have any practical application it must have much more constant medical supervision than could be given to it in any of the military hospitals. This supervision must gauge the whole daily sum of exercise for each patient, not merely the relatively light work of an hour in the garden. This criticism plainly applies with equal force to the prescription of graduated walks. Such regular walking exercises may possibly be of considerable value to tuberculosis patients, but not unless they are supervised with great care.

4. *General Education.*—The general teaching given in the reconstruction schools was apparently of much practical value. Indeed it is clear that more of this work should have been done. Many patients who sorely needed help missed the opportunity. Possibly more compulsion or greater tact in handling these patients would have accomplished more. The work was most needed in the most elementary subjects; but much more might have been done to the general profit in commercial subjects, particularly typewriting and simple bookkeeping. The work succeeded best when given to small groups or to individuals upon the ward porches.

5. *Americanization.*—The work for the Americanization of alien soldiers has been one of the most fascinating and inspiring undertakings in the whole reconstruction enterprise. Its value can not be doubted. It has met with distinct success. While it has been peculiarly appropriate to the Army, it has such a general social value that it may seem almost indispensable in future tuberculosis work. Tuberculosis in our country is likely to be always partly a problem of the foreign population, of un-Americanized, uneducated, ill-paid social groups; so that whatever may be done to assist in general education and in Americanization cuts toward the very root of the disease.

6. *Handcrafts.*—The striking success of the handcrafts in all the tuberculosis hospitals makes it necessary to consider this branch of the work with some detail. First of all it must be seen that the success of the work was due in considerable part to the personal attractions of the reconstruction aides. This is offered as a cool scientific statement without any implications. The women secured for this service during the war period were nothing less than remarkable in their high character, their wholesome behavior and their inspiring personality. In this work personality counts very heavily.

But the character of the work itself makes it highly effectual to the purposes in view. It is interesting; it occupies the hands

and mind; it is not tiring; it can be taken up or laid aside at will; periods of work alternate pleasantly with periods of relaxation; the finished product has demonstrable value. It must be recognized as a fact that the great majority of patients are not capable of any intense or prolonged mental attention. The handicrafts, however, reach their minds through their fingers, the shortest and surest route.

The educational value of these crafts has not been sufficiently recognized. Education is too generally regarded as a wholly mental process. This is far from true, yet if it were the literal fact, the handicrafts might still be the most effective means of arousing mental activity. Work upon a bead-loom, for example, requires a certain concentration of attention, and control of attention is one of the foundations of all education. It requires further a close coordination of the eye, of delicate muscular movement and of mental direction. This cooperation of mind and body is in itself education in one of its highest and best forms.

Moreover the pupil in handicrafts learns something of design and of honest construction. Both these items are of serious value to every hand worker whether he be carpenter, tinsmith, weaver, tool-maker, or farmer. It is a great defect of modern society that it depends too much on machinery. Everything we touch is machine-made. The common laborer in particular hardly ever sees or touches anything but machine-made objects. He begins life in a machine-made go-cart, eats canned food from a machine-made table with a stamped steel knife, fork and spoon, dies in the hospital in a machine-made bed, is buried in a machine-made coffin and marked with a machine-made tombstone. When such a man once makes with his own hands a good basket or leather pocketbook he begins to realize the value of honest craftsmanship—the place of personal responsibility in the day's labor. This is a most fundamental element in human psychology now largely lost in a mechanical world where objects are made by machines, not by men. The men only feed the machines and are themselves controlled by another social machine called a labor union.

Still further, though less important, it must be pointed out that the objects made by the patients taking handicrafts have an immediate commercial value. They are readily saleable and at good prices. The objection sometimes raised against the work of tuberculosis patients was conspicuously absent from our experience at No. 16. The patient who turns out a product which sells for real money experiences a stiffening of morale which is

of the utmost value. No matter how discouraged he may have been he can no longer feel himself completely down and out.

This feature of the work, the sale of products of occupational therapy, demands careful handling, but it is worth all the trouble required.

7. *Hospital Service*.—Experience at Hospital No. 16, supported by the experience of others, shows that hospital service is a very difficult form of exercise to administer. The difficulties in fact are so great as to make the effort inexpedient except in a minority of cases. It seems probable that in civil hospitals where simpler relations obtain amongst patients and personnel more can be expected. Especially if a cash value can be placed on the service of the patient and this amount subtracted from fees which the patient must pay, or some other arrangement can be made so that he feels he is being fairly remunerated for his work, reasonably good results may be expected. This form of reconstruction work, however, is the most difficult of all to manage and the least effective for all purposes, so that we can hardly feel that those sanatoria which have made it the leading feature of their reconstruction programs have fairly broached the possibilities in this field.

8. *Recreation*.—While athletic sports are hardly admissible to a program of tuberculosis therapy, other forms of recreation are highly desirable. In every hospital, sanitarium or convalescent colony adequate provision should be made of wholesome recreative recreation. This matter is of such importance that it must not be left to chance. The recreation should be planned, directed, carefully supervised and coordinated with all the other therapeutic measures which we are grouping here under the rather loose general term of reconstruction. In the military hospitals these recreation activities have been divided amongst several volunteer welfare organizations, an arrangement obviously impracticable under other circumstances.

9. *Welfare Work*.—Inevitably a certain amount of welfare work or social service was done by the Reconstruction Service at No. 16. The more definite undertakings of this sort were made at the hands of the medical social service aide sent from Washington for that purpose. The great bulk of all such work however was done by the Red Cross, the Y. M. C. A., and the K. of C., not forgetting the official chaplains. A most considerable amount of such work has to be done at every civil hospital. Our experience shows that it can be effectively administered as a part of the reconstruction program and indicates pretty definitely that this is the best way in which to direct it.

## SUMMARY OF RESULTS

This experiment in the application of reconstruction ideas to the tuberculosis hospitals of the military group covered something over one year. During that time great changes occurred, not only in external conditions but in our intellectual conceptions of the purposes and methods. These changes have followed one another with bewildering rapidity. There was no leisure for study, reflection and generalization. These experiences remain yet largely undigested. There are many observations which still seem to contradict one another. Under such circumstances any statement of conclusions must be offered with great care. However a few points seem to be sufficiently clear to bear statement.

1. The reconstruction program has definite value in the tuberculosis hospitals. Every one seems to agree to that. Its chief utility lies in the assistance which it gives to the rest cure and the favorable mental attitude which it induces in the patient.

2. The work done in lines of general education and Americanization has also had considerable value.

3. The most successful feature of the program has been the occupational therapy or crafts work on the wards.

4. To make the work as successful as it should be, strict medical supervision is necessary. As a matter of administration, however, this supervision may be largely delegated to reconstruction officers as was done at General Hospital No. 8.

5. The experiment has been valuable, has probably been worth its cost, and much of the experience gained can be passed along to civil institutions.

## THE FUTURE

Indeed this look into the future is what chiefly justifies the whole experiment. Tuberculosis we have always with us, and the war against it promises to be a much longer affair than the little flurry with the Central Powers. The treatment of tuberculosis in sanatoria and colonies of various sorts seems likely to be increasingly important, and in all such circumstances some form of reconstruction ought to be utilized. What does the Army experiment suggest for adoption into the peace-time warfare against tuberculosis?

1. In any given institution the work ought to begin on a small scale and be allowed to grow as its value is demonstrated and as means are available.

2. In a great majority of cases this beginning can best be



made with one first-class reconstruction aide, who must be a woman of experience, sound character and attractive personality.

3. Other sides, male and female, may be added as circumstances warrant. A male director should be appointed whenever the extent of the work justifies, and this director should be an educator rather than a physician. This distinction is important.

4. From the beginning there should be combined in this one service all the reconstruction functions of the hospital, *i. e.*, all social service, teaching, direction of crafts, supervision of recreation, etc., including everything now known either as reconstruction or welfare work.

5. In general the work should begin in the wards, and only after there are positive advantages in sight should there be developed any separate workshops or schools. Exception may be made for schools maintained primarily for the protection and observation of children of tuberculous parentage.

6. Hospital service as a form of reconstruction must be handled with great care, and should be presented in such a light as to seem to offer a direct financial advantage to the patient.

7. Gardening, poultry culture, bee-keeping and other light forms of agriculture may be used where good physical equipment and good teachers are available, but the medical supervision must be exceptionally careful.

8. The work must be at all times under the full control of the medical service, but best results may be expected if the details of all reconstruction activities are left entirely to the reconstruction workers. The value of experienced educational workers in this field seems to be fairly demonstrated.

9. Arrangements should be made in most hospitals for selling the products made by patients. These arrangements are important; they may also be difficult, and they should therefore be managed with considerable prudence.

### THE COST

Every one who considers the introduction of reconstruction work into civil sanatoria must early face the question of cost.

To begin the work as recommended with one first class woman aide will cost approximately \$1,500 a year for her salary. There should be a fund of about \$500 for initial equipment. In the judgment of the writer it will be entirely feasible in most institutions to make the products of occupational therapy pay the cost of raw materials, probably something over, so that steady expenditures on this account need not be anticipated.

It may be estimated that each good reconstruction worker can care for from 50 to 100 patients. Indeed one single worker could do a world of good amongst 500 patients, but a ratio of 1:50 or 1:100 is safer.

If workshops or outdoor schools or other buildings must be provided they present another item of expense, but this item is so variable as to escape estimate.

#### POST-SANITARIUM APPLICATIONS

The spirit and methods of reconstruction furthermore seem capable of projection even beyond the sanitarium in the treatment of tuberculosis. It is well known among tuberculosis workers that one of the most critical periods in the cure comes at the point of discharge from the sanitarium. The patient passes abruptly from a regimen of rest (or comparative rest) to a full day's work, from the wholesome surroundings of the sanitarium to the old home, sometimes unsanitary to a degree, from constant medical supervision to no supervision at all. Worst of all he feels compelled to do what others do, whether that be hard lifting in the day's work or staying out late at a dance. The results are seen in a deplorable percentage of relapses.

It has seemed that much might be gained if this transition could be made more gradual. The one crucial point usually lies in light part-time work at which the patient can become partially self-supporting and in which he can progress safely to heavier labor and longer hours as he gains in strength. In short the problem is one of graduated exercises, of occupational readjustments, and follows logically upon the reconstruction work of the sanitarium period.

The solution which appeals to many minds as promising for trial lies in the provision of industrial colonies, institutions which would lie between the sanitarium and general industrial life. A very interesting study of this proposition has been published recently by Dr. H. A. Pattinson.<sup>2</sup> The present writer prepared an outline project running along similar lines which was considerably discussed at General Hospital No. 16 by the medical and reconstruction staffs. The outline is herewith reproduced as suggesting a further extension of reconstruction ideas to the everlasting fight against tuberculosis in civil life.

#### RECONSTRUCTION TOWN

*Sketch Project for a Village devoted to the Care and Rehabilitation of Persons recovering from Tuberculosis*

<sup>2</sup> Federal Board Vocational Education Bulletin, Series 6, No. 32, June, 1919.

1. *Purpose*.—Primarily to supply post-sanitarium care for persons recovering from tuberculosis, and to effect their full and permanent rehabilitation, physical, economic and social.

2. *General Scheme*.—To provide the facilities necessary to this purpose in a special village or villages. Preferably such centers will be created *de novo* in selected locations. The essential facilities would appear to be:

- (a) A rather full and paternalistic control of industries, exercised perhaps by a director of industries.
- (b) Adequate medical supervision, probably exercised through a public dispensary and clinic.
- (c) An intelligent social service.

3. *Physical Setting*.—Such a colony should be located within reasonable distance of large centers of population yet outside the urban districts. The village should be designed by the best specialists in modern town-planning and industrial housing, and such plans should conform clearly to the special purposes to be served.

4. *Location*.—Sites for such colonies might be found within or upon the borders of the national and state forests. Certain advantages would derive from such location, in particular the following:

- (a) Large tracts of suitable land are easily available.
- (b) The surroundings would be wholesome, sanitary and attractive.
- (c) The forests supply the foundation for permanent industries especially adapted to the needs of such a colony. This is a most important consideration.
- (d) Necessary conditions of land tenure and administration would assist toward the somewhat paternalistic control essential to success.

5. *The Family Unit*.—Since this plan assumes the protracted—in many cases permanent—residence of convalescents, it must provide for their families. In fact an essential feature of the service contemplated is to transplant infected families to a new environment where the children may be protected.

6. *Economic Foundation*.—Industries should be of such a nature and managed in such a way as to provide graduated labor, under safe and wholesome conditions, to convalescents and recovered patients in all stages. Light occupational therapy could be given to chair patients or those still in their homes; light work in special shops for short periods to patients more fully recovered; full-time work to those capable of it. All would be under constant medical inspection. (The small wood-work-

ing industries seem particularly adapted to this end.) Obviously these industries must be organized and supervised with a view to the rehabilitation of men and women rather than to the exploitation of man power or of the forests.

7. *Other Employments.*—The economic ideal would be found in a completely autonomous and self-supporting community. Beside the basic industries there would be many correlative functions open to convalescents and to recovered persons. These would include laundry, garage, telegraph and telephone service, shop-keeping, road mending, etc. In particular should opportunity be available for small farming, truck growing, poultry keeping and other food-producing enterprises as a part of the community development.

8. *Social Engineering.*—It would be clearly necessary to provide schools, religious opportunities and specialized facilities for recreation. These should be directed by competent persons and definitely coordinated with the therapeutic and prophylactic control.

9. *Financial Support.*—Such a community might eventually become largely self-supporting. At its inception, however, considerable sums of money would be required. It would probably be necessary to look to private sources for these funds rather than to federal or state support.

10. *General Control.*—Might be exercised through a special board of trustees, through the National Tuberculosis Association, or in some similar way. Some form of self-government for the community should be devised compatible with the central control of essential features.